

NOTES ON THE ANATOMY OF *BULIMULUS AURIS-SCIURI*,¹ Guppy.

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Read May 11th, 1894.

A short time ago the British Museum received a living specimen of *Bulimulus auris-sciuri*, Guppy, from Trinidad, which came into my hands for dissection through the kindness of Mr. E. A. Smith, to whom I would take this opportunity of returning my thanks. Since I know of no published description of anything more than the shell of this species, I think it worth while to give the following notes on its anatomy.

The animal reached me in a sluggish and apparently dying condition; it was in consequence difficult to make much out of it while alive. Its body was of a pale fawn colour, the ocular tentacles being darker, while the labial tentacles were of a brilliant orange-yellow; the foot was elongated, rounded in front and pointed behind, its under surface showed a central area of a reddish-brown colour, and a paler marginal region sparingly spotted with the same colour as that of the central area.

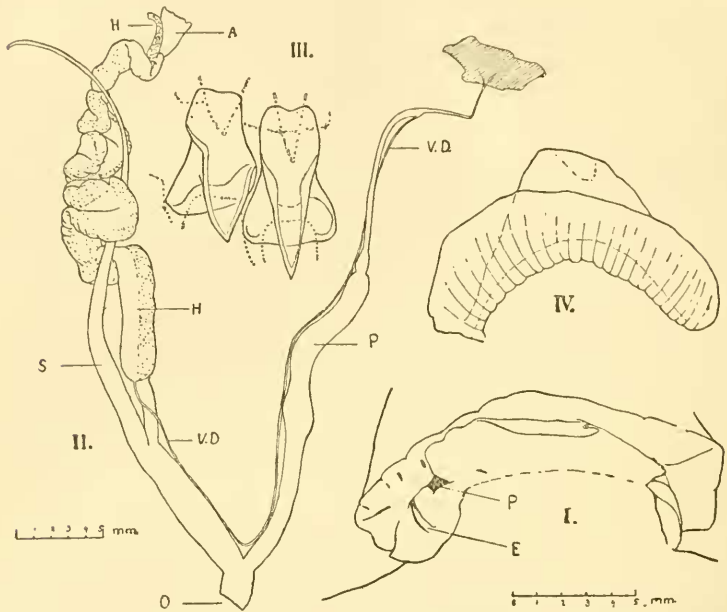
The following (Fig. I.) is a sketch of the "collar" of the mantle viewed from below: it will be noticed that the pulmonary opening is separated by a well-marked upstanding valve into distinct anal and respiratory apertures; the presence of a couple of neck lobes on the mantle is also noteworthy.

The excretory duct opens immediately above and slightly behind the anus, it is continued as a slight groove into the anal orifice.

In the anterior part of the mantle cavity, which by-the-by extended back throughout more than a complete whorl, the pulmonary vessels were thickly beset with small spherical structures averaging about .5 mm. in diameter, and of a brownish red colour; a small portion of this region of the mantle was preserved for microscopical investigation; examination of sections through it revealed the presence of a central aggregate of yellowish cells in the interior of each of the before-mentioned rounded structures. Similar cells were also loosely diffused through the surrounding tissues of the mantle, more especially towards its outer surface. I have so far been unable to determine whether these yellow cells are, as I am inclined to believe, merely pathological organisms (such as the spores of parasitic fungi) or whether they are specialized elements which are normally present in this creature, and perhaps of assistance in the performance of the respiratory function. It is worthy of note that the lumen

¹ It has been pointed out to me, by Mr. E. A. Smith and our Secretary, that this species is undoubtedly a variety of *B. glaber* (Gmel.).

of each cyst is apparently directly continuous with that of an adjacent pulmonary vessel, while the contained yellow cells are, but for their colour, not altogether unlike the blood-corpuscles.



Figures of portions of the anatomy of *Bulimulus auris-sciuri*, Guppy.—I. Collar of mantle, right side, viewed from below, showing the pulmonary (P) and excretory (E) orifices, and the collar lobes. II. Genitalia: A, portion of albumen gland; H, H¹, hemaphrodite duct (the gland was missing); O, genital orifice; P, penis; S, spermatheca; V.D., vas deferens. III. Central teeth of the radula. IV. Jaw, seen from the front ($\times 13$).

The above figure (II.) will render further description of the genital organs unnecessary; unfortunately, as the visceral sac was partly broken away in removing the animal from its shell, the ovotestis and part of the albumen gland are missing from the drawing.

The radula (Fig. III.) consisted of about 140 rows, having the formula $54:1:54$. The lateral teeth differ from each other mainly in the fact that the diminution in size, which is correlated with approach towards the periphery of the radula, is accompanied by a comparative enlargement of the outer cusp, which, as is shown in the figure, is insignificant in the more central teeth.

The jaw (Fig. IV.) was semicircular and minutely plicated.

Nothing was observed in the nervous, circulatory, or muscular systems which called for special remark.